

REMARKS

This is in full and timely response to the Final Office Action mailed on May 13, 2003. Reexamination in light of the amendments and the following remarks is respectfully requested.

Claims 2, 4, 8 and 11-12 are currently pending in this application, with claims 2 and 12 being independent.

This amendment *prima facie* places the case in condition for allowance. Alternatively, it places this case in better condition for appeal. Accordingly, entry of this amendment is respectfully requested. No new matter has been added.

Applicant, seeking review of the prematureness of the final rejection within the Final Office Action, respectfully requests reconsideration of the finality of the Office action for the reasons set forth hereinbelow. See M.P.E.P §706.07(c).

Rejections under 35 U.S.C. 112

Claim 9 was rejected under 35 U.S.C. 112, second paragraph.

This rejection is traversed at least for the following reasons.

While not conceding the propriety of this rejection and in

order to advance prosecution of the above-identified application, claim 9 has been canceled. Withdrawal of this rejection is respectfully requested.

Rejections under 35 U.S.C. 102 and 103:

Claims 2, 4, 8 and 9 were rejected under 35 U.S.C. 103 as being allegedly obvious over U.S. Patent No. 4,053,383 to Dötzer et al. (Dötzer).

Claims 2, 4, 8 and 9 were rejected under 35 U.S.C. 103 as being allegedly obvious over U.S. Patent No. 4,759,831 to Birkle et al. (Birkle).

Claims 2, 4, 8 and 11 were rejected under 35 U.S.C. 102 as being allegedly anticipated by U.S. Patent No. 4,176,034 to Stoger et al. (Stoger).

Claim 9 was rejected under 35 U.S.C. 103 as being allegedly obvious over Stoger.

These rejections are respectfully traversed for at least the following reasons.

As an initial matter, while not conceding the propriety of the rejection and in order to advance prosecution, the features

of claim 9 have been incorporated into claim 2 to form amended claim 2.

Within the claims, the plating chamber includes means for embedding a copper film in a groove or in a connecting hole of an article to be plated in the plating bath.

Birkle is drawn to an electroplating apparatus particularly for electro-deposition of aluminum. Dötzer and Stoger are drawn to apparatus for electrodepositing aluminum. Yet, nothing within the teachings of Birkle, Dötzer or Stoger, either individually or as a whole, disclose, teach or suggest an apparatus capable of embedding a copper film in a groove or in a connecting hole of an article to be plated in the plating bath.

In this regard, a copper film is conspicuously absent from Birkle, Dötzer and Stoger. Embedding any type of film in a groove or in a connecting hole of an article to be plated in the plating bath is also conspicuously absent from Birkle, Dötzer and Stoger. Thus, an apparatus capable of embedding a copper film in a groove or in a connecting hole of an article to be plated in the plating bath is not shown by Birkle, Dötzer or Stoger.

As a gap-filler for the features absent within Birkle, Dötzer and Stoger, the Office Action relies upon "intended use,"

contending that the skilled artisan would have modified the apparatus of Birkle, Dötzer and Stoger.

In response to this contention, please note that "all claim features must be considered." *Ex parte Petersen*, 228 USPQ 217, 218 (Bd. Pat. App. & Int. 1985). The plating chamber of the claimed invention includes means for embedding a copper film in a groove or in a connecting hole of an article to be plated in the plating bath. At least for the reasons provided herein above, this feature has not been shown to exist within Birkle, Dötzer or Stoger, either individually or as a whole, and exclusion of this claimed feature from consideration is improper. Withdrawal of these rejections and allowance of the claims is respectfully requested.

New claim

The newly added claim includes a plating bath provided within a plating chamber, wherein the plating bath contains a plating solution for forming a plating on an article to be plated. The plating bath is maintained in a non-oxidative atmosphere, wherein the plating contains a void having the non-oxidative atmosphere therein.

These features are not found within the cited prior art. Allowance of the claims is respectfully requested.

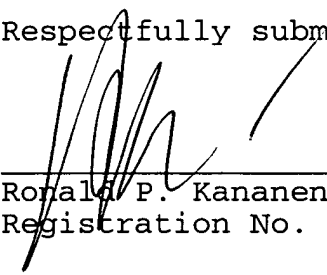
Conclusion

For the foregoing reasons, all the claims now pending in the present application are allowable, and the present application is in condition for allowance. Accordingly, favorable reexamination and reconsideration of the application in light of the amendments and remarks is courteously solicited.

If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone Brian K. Dutton, Reg. No. 47,255, at 202-955-8753 or the undersigned attorney at the below-listed number.

If any fee is required or any overpayment made, the Commissioner is hereby authorized to charge the fee or credit the overpayment to Deposit Account # 18-0013.

Respectfully submitted,



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